



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/817,525	03/26/2001	Kenji Nakamura	15162/03440	7900
24367	7590	10/05/2004	EXAMINER	
SIDLEY AUSTIN BROWN & WOOD LLP			TILLERY, RASHAWN N	
717 NORTH HARWOOD			ART UNIT	PAPER NUMBER
SUITE 3400			2612	5
DALLAS, TX 75201			DATE MAILED: 10/05/2004	

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/817,525	NAKAMURA, KENJI
	Examiner	Art Unit
	Rashawn N Tillery	2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 26 March 2001.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-15 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) 1-6 and 14 is/are allowed.

6) Claim(s) 7,8,12,13 and 15 is/are rejected.

7) Claim(s) 9-11 is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date: _____.
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>4</u> .	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 12, Applicant claims setting in advance predetermined light amount correction data for predetermined blocks. Similarly, claims 1 and 14 disclose the same feature. However, unlike claims 1 and 14, claim 12 claims image field edge resolution reductions. Based on applicant's specification and the above mentioned claims, the Examiner feels this limitation is in error. The light amount correction data is used for correcting brightness reduction not resolution reduction.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7, 8, 13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Houchin et al (US5047861) in view of Weiderman et al (5867211).

Regarding claims 7, 13 and 15, Houchin discloses, in figure 1, a digital camera comprising

an image pickup element (10) for capturing an image;

a correction value memory (40) for storing predetermined pixel correction data each set in advance for each one of predetermined blocks (the examiner is interpreting "predetermined blocks" as individual pixels) which are obtained by dividing the entire area of the image captured by the image pickup element into at least a central area and a peripheral area (the examiner notes that it is well known in the art that when performing shading correction, a difference between the brightness in a portion in the vicinity of a central point and the brightness in a peripheral portion is corrected); and

an edge enhancer (60) for edge-emphasizing the respective pixels based on the pixel correction data which are held in the correction value memory to thereby correct image field edge brightness (see col. 3, lines 30-56).

Houchin does not expressly disclose resolution correction data. Weiderman teaches that it is well known in the art that shading and offset cause additional problems when the resolution of the sensor is being measured (see col. 1, lines 43-54; also see col. 2, line 55 to col. 3, line 55). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Houchin's device by implementing Weiderman's teachings of MTF correction. It would have been highly desirable for Houchin to be able to increase the resolution of an image by performing both shading correction as well as MTF correction. One would have been motivated to do so in an effort to increase image quality.

Regarding claim 8, see claim 7 above.

Allowable Subject Matter

1. Claim 12 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.
2. Claims 1-6 and 14 are allowed.

Regarding claim 1, the prior art does not teach or fairly suggest a digital camera comprising an image pickup element, a correction value memory, a correction value generator and an image field edge brightness reduction corrector, wherein the correction value generator generates correction values regarding light amounts at the respective target pixels within the blocks based on the plurality of pieces of light amount correction data.

Regarding claim 14, the prior art does not teach or fairly suggest a recording medium which stores a program for correcting light amount drops at the edge of an image field for executing a sequence for generating correction values and correcting image field edge brightness reductions, wherein

the correction value generator generates correction values regarding light amounts at the respective target pixels within the blocks based on the plurality of pieces of light amount correction data.

3. Claims 9-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 9, the prior art does not teach or fairly suggest a digital camera comprising an image pickup element, a correction value memory and an edge enhancer, wherein

the correction value generator weights, in accordance with the positions of target pixels, the resolution correction data which are associated with blocks containing the target pixels and other neighboring blocks next to the target pixels of the image.

Regarding claim 10, the prior art does not teach or fairly suggest a digital camera comprising an image pickup element, a correction value memory and an edge enhancer, wherein

the correction value memory holds the resolution correction data which become different depending on a predetermined optical condition during imaging.

Regarding claim 11, the prior art does not teach or fairly suggest a digital camera comprising an image pickup element, a correction value memory and an edge enhancer, wherein

the blocks in the peripheral area are set to be smaller than the blocks in the central area.

Conclusion

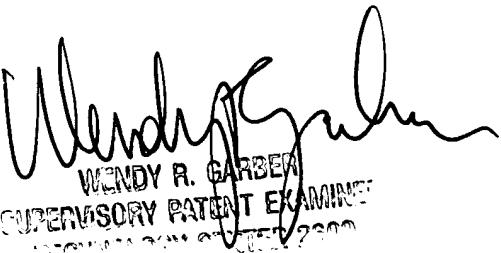
1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Gallagher et al teach a method for compensating images for light falloff. Shiomi teaches a device for correcting sensitivity non-uniformity.

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rashawn N Tillery whose telephone number is 703-305-0627. The examiner can normally be reached on 9AM-6:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on 703-305-4929. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RNT



WENDY R. GARBER
SUPERVISORY PATENT EXAMINER
APRIL 2007